

Appln. No. 10/786,899

Docket No. 1625-172

Amendment

Reply to Office Action dated October 4, 2005

REMARKS

The foregoing amendments and these remarks are in response to the Office Action dated October 4, 2005. This amendment is timely filed.

At the time of the Office Action, claims 1-4 were pending. In the Office Action, claims 1 and 2 were rejected under 35 U.S.C. §102(b). Claim 3 was rejected under 35 U.S.C. §103(a). Claim 4 was objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The objections and rejections are discussed in more detail below.

I. Rejections on Art

Claims 1 and 2 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,111,510 to Mitobe ("Mitobe"). Claims 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over Mitobe in view of U.S. Patent No. 5,687,248 to Yen et al. and U.S. Patent No. 5,321,762 to Stuart.

Applicant notes that Mitobe discloses a center pole 31 integrally formed with a yoke 32, and a driver unit 30 constituted by assembling a magnet 33, a top plate 34, the center pole 31 and the yoke 32. By insertion of the drive unit 30, a second piece cavity 16A for molding the second piece 16 is formed by molds 17A and 17B. When resin is injected into the second piece cavity 16A, the driver unit 30 and the second piece 16 are integrally combined with each other so that the third constituent member X3 is obtained in the state in which the second piece 16 is fitted to protrusions 34A of the top plate 34 (see column 3, lines 17-29) of Mitobe. Thus, Mitobe discloses a fixation framework having a ring-shaped permanent magnet 33 and second piece 16 serving as its supporting member.

Notably, however, the permanent magnet 33 and second piece 16 of Mitobe are fixed to the first frame piece 11 serving as a speaker frame. Therefore, the "permanent magnet 33" functions only as a stator. In contrast, the ring-shaped permanent magnet and the support member recited in claim 1 are provided as a movable part, which may reciprocate in the axial direction. Thus, the structure of Mitobe is quite different from that which is recited in claim 1.

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In addition, the magnet 33 of Mitobe is formed integrally with the top plate 34, the center pole 31 and the yoke 32 before molding, and has a drawback that a coaxial alignment accuracy of the magnet 33 to the second piece 16 depends on the top plate 34, the center pole 31 and the yoke 32.

According to claim 1, however, the ring-shaped permanent magnet and the supporting member are each provided as a movable part, which requires high alignment accuracy, and thus the ring-shaped permanent magnet is directly insert-molded relative to the supporting member. Thus, the coaxial alignment accuracy of the ring-shaped permanent magnet to the supporting member does not depend on other members, and is capable of satisfying such high alignment accuracy as required of a movable part. In order to clarify the differences of the present invention from the cited reference, claim 1 is amended herein to recite that the ring-shaped permanent magnet and the supporting member are movable parts.

Referring to the other references cited in the Office Action regarding claims 2 and 3, Yen discloses that the primary magnet 60 may be made of rare earth magnet materials, such as Nd-Fe-B systems, but the primary magnet and thin magnet 56 are provided only as the stator of a loudspeaker. Nowhere in Yen is it described that these magnets 60 and 56 are insert-molded integrally with the yoke 50. Also, while Stuart describes that a magnet 54 is provided as the stator of a voice coil and disposed in intimate contact with an inner second wall 64 of a rod 68, Stuart does not disclose the insert-molding of the magnet 54.

For the foregoing reasons, claim 1 is believed to be patentable. The dependant claims are also believed to be allowed because of their dependence on an allowable base claim, and due to the further features recited therein.

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Docket No. 1625-172

II. Conclusion

Applicants have made every effort to present claims which distinguish over the prior art, and it is thus believed that all claims are in condition for allowance. Nevertheless, Applicants invite the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. In view of the foregoing remarks, Applicants respectfully request reconsideration and prompt allowance of the pending claims.

Respectfully submitted,

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Docket No. 1625-172